

## ***Exercise 7—Rating Curve Development, Multiple Offsets***

- Use BARC to develop two segments of a single rating using two offsets such that each segment passes within reasonable limits of all measurements associated with that segment. Use BARC to see how it can aid in developing a rating with two offsets. Measurement information is shown in the attached table.

Suggested procedure:

1. Use [BARC](#) to input all measurements and plot them using a common scale offset, such as 1.0 ft. In BARC, use input for Rating A to develop this rating.
2. Develop one rating for the lower five measurements and another for the upper four measurements. Use input for Ratings B and C, respectively to develop these rating segments
3. Determine the best offset for the lower rating segment. You should be able to come up with a rating that falls within 5% of the lower 5 measurements.
4. Determine the best scale offset for the upper segment of the rating. Once again, you should be able to develop a rating that falls within 5% of the upper four measurements.
5. Finally, use BARC's Rating D to develop a rating that uses two offsets and passes within acceptable limits of ALL measurements.
6. In the next exercise you will see how these two rating segments can be combined into a single rating. This cannot be done completely within BARC because BARC uses a single break point to transition between rating segments.

Measurement data for Exercise 7

Mill Brook near Dunraven, N.Y.		
Measurement number	Gage Height	Discharge
839	7.19	1000
840	9.74	2500
841	6.2	621
842	5.9	506
843	3.82	32.5
844	3.57	18.8
845	3.78	29.9
846	3.56	18.1
847	4.58	126